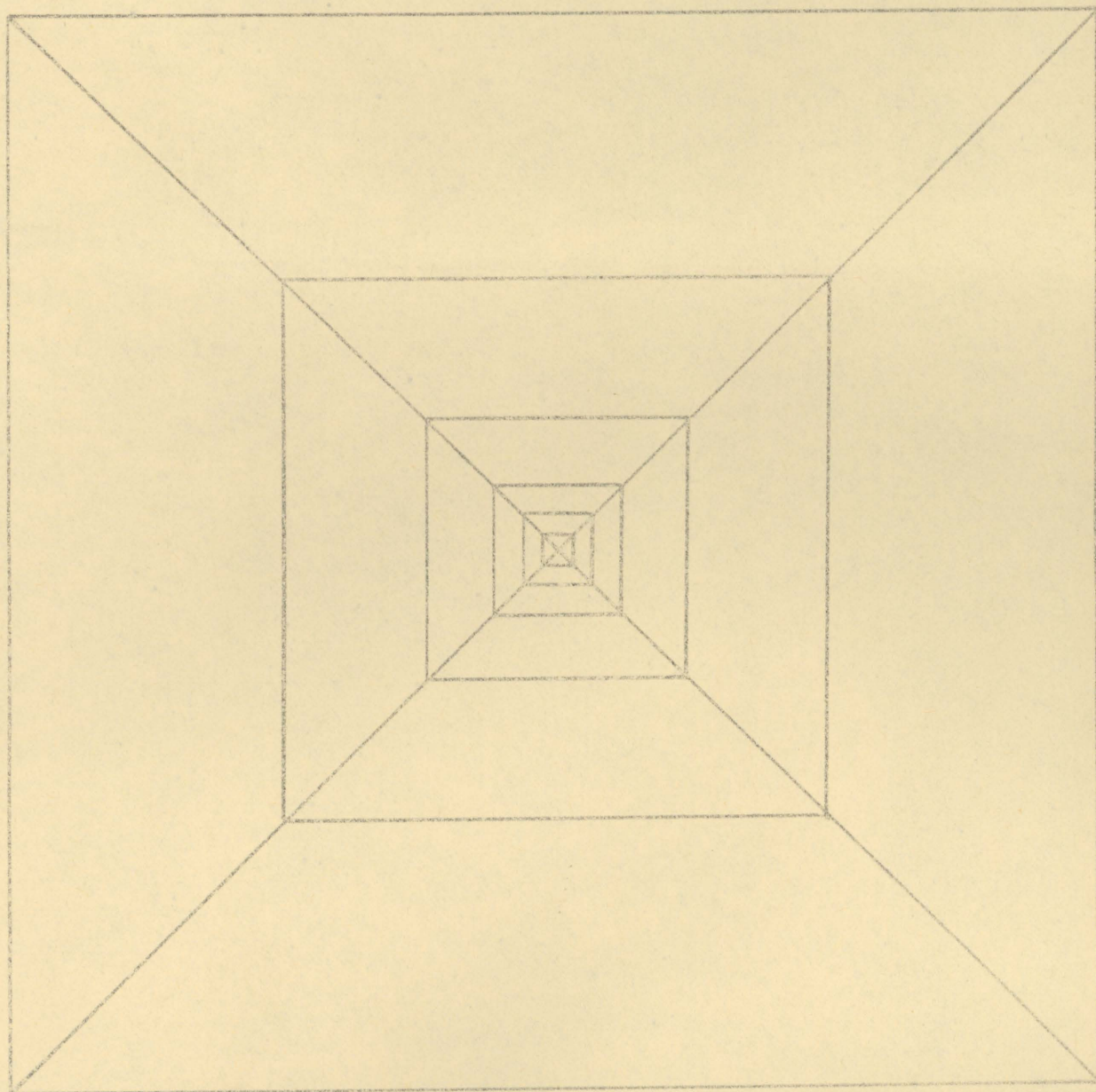


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NOTE: We apologise for the late delivery of last issue (Vol.2 No.6) which is forwarded with this issue. This was due to our supply of envelopes running out, and a holdup occurring with our printer on supply of new ones due to industrial disputes.

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Guest
Editorial

by David Seargent.

The future of the Australian ufological scene. While admitting that prophesy is the most unrewarding of occupations, I venture to predict that the immediate future will be one of further consolidation of the position of ACUFOS and of the scientifically oriented investigation for which it stands. The computer file will continue to expand, more investigators will be trained and, hopefully, increasing numbers of the general public and the news media will come to regard the UFO investigator as something other than a spaced-out cultist.

Part of this process of consolidation will, I think, involve a further tightening of the reigns upon Australian UFO investigation. This will probably be opposed by conservatives who still cling to the fading glory of completely autonomous and independent groups, but, I venture to say, the majority of up-and-coming ufologists will welcome it. After all, where would science be if every laboratory worked in isolation from the rest of the world? Where would medicine be if each Doctor had to discover his own remedies? To think that ufologists can work in isolation is surely just as ridiculous - at least if they seriously expect to make any kind of advances and are not content to merely form closed groups of people who pass the time drinking tea and talking about anomalous happenings.

This much is, I think, very likely. It is just an extension of the developments of the very recent past. What is somewhat less sure is the manner in which UFO research (as distinct from investigation) will drift. Of course, there is a clear line of demarcation between investigation, in the narrower sense, and research, also in the narrower sense. Investigation is only concerned with determining which raw UFO reports are likely to yield new empirical information and which are simply misinterpretations of familiar objects. But this is certainly not the end of the story. It is only the beginning. If ever the mystery of the UFO is to be solved, these unsolved

reports must be researched, in some way, in order to find some clue - some constant parameter or repeatable pattern - which may enable to consistent theory to be put forward. Then this theory must be adequately tested, in order to see if it can be used to predict formerly unknown features of the UFO phenomenon. Only then, will research have born fruit in the form of a relatively well-attested theory.

As yet, there are NO theories as to the nature of UFOs! Certainly, there are any number of hypotheses (most of them not even being dignified by that term) but no theories in the strict sense employed above. Therefore, the first priority of UFO research, in Australia and elsewhere, is to try to find a viable theory. This may come about (if it comes about at all) through the strengthening, by accumulation of evidence, of one of the current hypothesis until it reaches the stage where it can be truly termed a theory, or it may come from the failure of all known hypotheses in the face of accumulated data. Either way, analysis of data is the first priority.

Actually these words are almost exactly those used by Hynek some ten years ago, and it is almost scandalous that they are still relevant. Why has the issue proved so elusive? Is it too big for us? Are we approaching it from a wrong direction? Or is it elusive because it does not exist?

The first of these leads us into a pessimistic agnosticism, which is the best avoided unless all other avenues are found to lead into dead ends. The last is really a little too simplistic, as even if there is no such thing as the UFO phenomenon per se, there is still a very real issue involving (at the very least psychological experiences or lying on a truly frightening scale, and this itself would be well worth researching.

Thus, it seems we are left with the middle alternative, and it is here that my earlier mentioned doubt creeps in. If we are doing something wrong, where shall we go from here? What is the correct path?

In my opinion, there are only two paths, and if one is not right - or, just possibly, if both are not partially right - I am at a loss to know how the problem can ever be solved.

First there is the path of seeking an over-view of the phenomenon in a large mass of sightings, in the hope that patterns may emerge or that some clue to the whole mess will drop like a bolt from the blue. This, in Australia as elsewhere, has tended to be the traditional approach - which means that it is the one which has produced meagre and apparently contradictory results!

The other approach is the one favoured by some Australian investigators, e.g. Bill Chalker. This is the in-depth study of a few well-established cases or geographical areas which seem to show a higher than normal incidence of UFO sightings. This approach relies upon the assumption that all UFO reports are generated by the same class of stimulus and that, in consequence, the solving of one report of a genuine unidentified will result in the solving of them all. Such a philosophy may be disputed, but I feel that this approach may be given increasing weight in the coming years as the higher standards of investigation either eliminate all unidentifieds completely (in which case the UFO problem will be solved by default, as it were) or else present well-investigated cases of such strangeness that an unconventional answer is clearly applicable, an answer which the detailed documentation now required by ACUFOS investigators may enable to be found.

These two approaches are not mutually exclusive, of course, and a "mixing" of the two ways may become possible once the reports of the various study groups recently formed within ACUFOS are presented. That is to say, a catalogue of entity cases, animal reaction cases and the like present a researcher both with an overview of one aspect of the phenomenon and with a chance for an indepth study of that aspect.

Closely related to this approach is the indepth study of geographical areas which exhibit an unusual amount of UFO activity or, to express this in more neutral terms, are noted for excessive numbers of UFO reports. Bill Chalker, in particular has long favoured the in-depth investigation of these so-called "flap areas" in an endeavour to find possible periodicity in the times of maximum report numbers. If this could be established, it should be possible to predict the next time that a flap area is likely to become "active" and to send in qualified researchers and instrumentation and, hopefully, catch the phenomenon in action.

Whether scientific paydirt is forthcoming or not remains to be seen. Quite possibly, such in-depth research on a very limited number of cases will tend to impose certain limits upon the phenomenon, limits within which any hypothesis must work if it ever hopes to graduate into being a theory. Whether any such limits will be sufficiently constraining to eliminate all but one hypothesis is a prediction which I will not venture, but such remains the constant hope of all ufologists, whether in Australia or anywhere else.

To Seti, or Not to Seti? - That Is The Question

by John Prytz.

The search for extraterrestrial intelligence (SETI) via the detection of artificial radio signals originating from extra-solar civilisations, has been criticised by some ufologists, scientists and politicians (ie: Senator William "Golden Fleece" Proxmire) as either unnecessary, desperate, or wasteful research (see bibliography). While the political merits of radio SETI are beyond the scope of this paper, I will never-the-less argue the case for traditional SETI as a valid part of the overall concern for the detection of ETI (which ufologists and scientists in general share, even if politicians might not).

The general anti-radio SETI argument runs thusly. 1) Extraterrestrial life, with advanced technology, must be common in the universe. 2) Interstellar space travel is possible. 3) Motivations for space travel are many, and include such things as exploration, exploitation, colonization, species survival (even immortality), even evangelicism or missionary work on a galactic scale. 4) It takes a small fraction of the age of the galaxy for a space-faring race to cross the diameter of the galaxy. 5) Population growth is exponential. 6) Therefore, it takes only one (farless possible thousands of) extra-solar, technically advanced, civilisation(s) to saturate the galaxy. 7) The odds that we (human beings) would be the first such civilisation to reach that threshold are nil. 8) Therefore one cannot have abundant ETI without having evidence for them on Earth. 9) If that is so, why bother with radio SETI? If we haven't already found them, we shall never find them because they do not want to be found and they have the technological ability to insure this!

But what if any but the 1st and 7th assumptions are wrong? Then clearly the traditional approach to SETI is the only way to fly! But let us, for sake of argument, take the assumptions as they stand, except perhaps for the 9th one, which if true, means we shouldn't bother with any SETI activity (radio, ufological, ancient astronauts, etc.) at all. Rather we should spend our time, money, efforts, talents, interests, etc. on something more productive (like perpetual motion!).

There are those who argue that we have already found the extraterrestrial and "they" are us! However, unless Planet Earth was "seeded" very early in its geological history by extraterrestrials, all chemical and biological evolutionary evidence points to a terrestrial origin for man. So, there is no use in SETI just be looking at ourselves! Other approaches are necessary.

Is radio SETI such an approach? Some ufologists would say no. The rational goes that from their point of view, it would be time, effort, and money better spent to SETI via the UFO phenomena. In other words, why search hundreds of thousands of individually low probability target stars, dozens to thousands of light years away, at unknown and unknowable frequencies, for an alien technological manifestation (radio waves) which may not exist, when alien spaceships (UFOs) are already here in our immediate neighbourhood? Why undertake a radio search for ETI which could and probably would take generations, when an equal effort could pin down the alien origin of UFOs in a period of several years? (One must assume in both cases that such aliens are not deliberately hiding from us. To assume otherwise only clouds an already foggy picture. We don't know there is no desire of extraterrestrial contact (even given the lack of success to date) so why complicate things?)

Being a pro-radio SETI and a pro-UFO enthusiast, I answer the above objection by stating that: a) one should do both, as b) (to use a very old cliché) one doesn't put all of one's eggs in one basket! If one wishes to SETI (whether via archaeology (ancient astronauts), UFOs or radio astronomy), a multi-disciplinary approach is desirable. SETI efforts, at this stage of the game anyway, should not be "either/or", and should remain in a multi-attack effort mode until such time as solid evidence strongly suggests that one or more of the current methodologies must produce zero results.

Scientific research, when objectives are clearly defined, is usually done through a multi-approach methodology as one never can predict in advance which approach will succeed. One sees this in cancer research, research into alternative energy sources (it is not either solar or wind or thermal or biomass or tidal, but all of these and more and in solar system astro-physical exploration (utilising all electromagnetic spectrum frequencies; earth-based and space-based instrumentation, etc.)

Given the current state-of-the-art knowledge about this "needle-in-the-haystack" scientific problem, the case for the radio approach to SETI is as sound as it can be, and has been thrashed out by some of the finest scientific minds pre-occupied with the problem of detection of ETI. Even when introducing the UFO phenomena into the equation, the case for proceeding with radio SETI is sound. Why?

UFOs may just prove not to be extraterrestrial spaceships! That possibility must be admitted by pre-ETI UFO buffs who retain their open-mindedness! Thus, concentrating on SETI via UFOs could lead one further and further up a blind alley, when all around us extraterrestrial artificial radio waves pass unnoticed.

Detection of ETI via radio searches, if successful prior to detection of ETI via ufology, could well spur the serious scientific research into UFOs by increasing in the minds of the scientific community the reality that alien life and alien technology really does exist, hence increase the plausibility of interstellar travel, hence the possibility that UFOs could be extraterrestrial spaceships. Publicity for the existence of ETI in one area only helps publicity for the existence of ETI in other areas.

Regarding funds and manpower: since money for UFO research isn't about to be forthcoming anyway (via government research grants, etc.), funds for radio SETI (also very much on a shoe-string) isn't detracting from UFO research. The manpower available to both isn't in competition either, which is not always true in other areas of scientific, medical, industrial and university research.

Research into UFOs has not proved the ETI hypothesis in 33 years, and has had a 13 year start on radio SETI (which has been done with far less manpower overall than ufology and only half-heartedly - except in Russia) which started in 1960. Therefore, radio SETI should be given at least another 13 years from the date ufology ceases, in order to have a "fair go". Thus, radio SETI could well bring in the proof positive in an overall shorter time frame than ufology has or could. Detection of artificial radio signals could come tomorrow!

Let me now re-introduce the lack of contact problem as it relates to radio SETI. Some ufologists argue that UFOs are example of ETI, but that "they" have a deliberate policy of non-contact. That is, "they" hide from us when it comes down to the nitty-gritty of formal contact. The reasons, many of which have been suggested, need not be of concern here. However, if that is so, ufologists argue that ETI will not advertise their presence via radio waves either, therefore radio SETI is worthless research! But...

There is more than one fallacy in that argument! If the ETI out there is the same ETI here in the neck of our woods, radio SETI could still detect accidental radio leakage from their home stellar system (assuming their use of a "shotgun" approach to broadcasting such as our own) even if they deliberately choose not to beam radio waves in our direction. However, and more to the point, there is no reason to assume that all ETI civilisations out there would of necessity be the same ETI civilisation that is skipping around our skies in their alien spaceships. Thus, one cannot assume that there is a universal policy by any and all ETI civilisations against detection and CETI (Communication with Extraterrestrial Intelligence). It is just as silly to assume that there are only two intelligent civilisations in our galaxy (us and them) as it is to assume there is only one (us).

No doubt there exists dozens (at minimum) to hundreds of thousands of advanced civilisations (conservative estimate), many of which may have the ability to communicate over interstellar distances, even if they haven't achieved interstellar space flight (sort of like us at our present stage of technological development). Only one (or a very few) of those could be represented by the UFO phenomena (assuming UFOs to be products of an advanced ETI civilisation(s)). Some of the rest are readily (if not easily) detected via radio SETI.

And even if there is only "us and them" in our galaxy, what about the other 10^{11} galaxies in the visible universe? Any one or all of them could be considered targets for radio SETI!

Let us also consider the argument that the first ETI civilisation to arise and achieve space travel has saturated not only our galaxy but all the galaxies, except for ourselves of course, such that in the entire universe there is only "us and them". One would have to assume that "they" would still have to keep in contact and communicate with their various stellar colonies/outposts. Communication by radio waves (or other frequencies in the electro-magnetic spectrum) would of necessity have to be faster than physical space travel (assuming that the "speed of light barrier" is real, and there is yet no reason to assume otherwise). Therefore, communication within this galactic club will be taking place, using some sort of electro-magnetic signal, and these signals should be detectable, given enough time. Radio SETI is only the first effort; UV SETI has also gotten off the ground (literally) why then no success yet? Why does it take so long to find a needle-in-a-haystack? The analogy is appropriate! The signal, like the needle, is there. It just takes time to stumble onto it!

In summary therefore, the fact that we might be, or are presently being visited by ETI civilisation(s) via the UFO phenomena, is no argument for not conducting radio SETI and I argue that research into both continue to be pursued and if possible increased right around the globe.

Bibliography:

- 1) Ball, John A. - "The Zoo Hypothesis" - Icarus, July 1973 - p.347-349.
- 2) Kuiper, T.B.H. & Morris, M. - "Searching for Extraterrestrial Civilisations" - Science, 6 May 1977 - p.616-621.
- 3) Michel, Aime' - "The 'Cat-Flap' Effect" - Flying Saucer Review, Vol. 25, No. 5, 1980 - p.3-5.
- 4) Schwartzman, David W. - "The Absence of Extraterrestrials on Earth and the Prospects for CETI" - Icarus, December 1977 - p. 473-475.
- 5) "SETI: Second Thoughts at IAU*" - Science News, 25 August 1979 - p.132-133.

*IAU: International Astronomical Union.

What is the Electric Field

Comments by Frank Gillespie.

INTRODUCTION: The following paper by Martin Gottschall originally appeared in UFO Encounter No. 92, May-June 1981. Gottschall, who also is the editor of UFO Encounter, teaches Physics professionally; and should therefore be a reliable authority on the subject. He has, in the past shown reluctance to publish comments which are critical of his writings; so, in the interests of open scientific discussion, his paper is reproduced here, followed by comments prepared by Frank Gillespie.

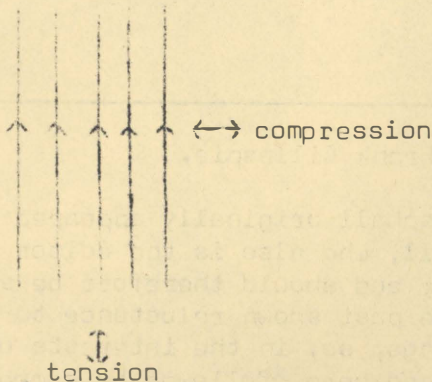
WHAT IS THE ELECTRIC FIELD - By Martin Gottschall.

When a Science student is taught about the electric field, he all too quickly passes to a state of "knowing" by means of rules and mathematics, without ever asking some very basic questions. It is surprising the extent to which electric fields can be understood by using ideas about ordinary matter. In fact, electric fields can be regarded as a kind of substance.

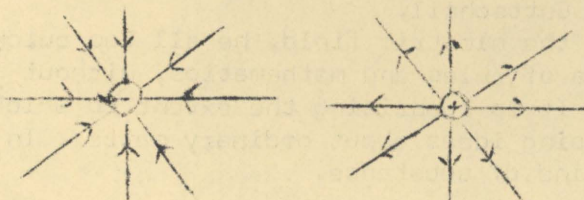
Consider the following:

1. Energy has to be expended to produce an electric field.
2. When an electric field is set in motion, additional energy is required. With ordinary objects, we call this energy motion kinetic energy, but in the case of the electric field, we call it a "magnetic field".
3. Electric fields have a definite shape and resist distortion. Both tension and compression are always present. These stresses are perceived as attraction and repulsion under appropriate conditions.
4. While ordinary substances are 'atomic' and built of small units like a brick wall, electric fields have no invisible structure in this sense. They are "continuous".
5. Electric fields have no outer boundaries. Although these fields weaken steadily, they extend into virtually the whole universe. They might well be regarded as the threads binding the fabric of the universe together.
6. A bowl of jelly is a good analogy of an electric field and just as the jelly can be stimulated to wobble and undulate, so also can the electric field be made to wobble. However, since the electric field has no outer boundaries, the disturbance travels on and on, like ripples in an endless pond. Of course, the story is not that simple. At the heart of each electric field is a "particle", like an electron or a proton. If this object is "shaken", the surrounding field wobbles. Unlike the ripples in the pond, these disturbances do not spread out and weaken, but remain a "package", even for aeons of time as in the starlight that comes across to us in the universe.
7. There are two opposite kinds of electric field, and when two opposite fields of equal strength are made to 'overlap', the two effects which are now equal and opposite, cancel out, and no field appears to exist. Around an ordinary length of wire, there are equal numbers of both fields. When an electric current is passed through this wire, some of the negative fields (electrons) are set in motion, while the positive fields remain at rest. The existence of the moving negative electric field can be sensed to any distance away from the wire as a 'magnetic field'.
8. Ordinarily when two electric fields are made to cancel each other's effect, we say there is 'no field': However, two fields can never overlap precisely, and while it is a convenient fiction to say the 'field' has ceased to exist, we may more precisely say the fields exist in a "balanced" state. As the concentration of these 'balanced' fields increases, there may well be that effect on the properties of space which we call the "Gravitational Field".

An electric field is usually represented by a series of lines with arrows as shown:



The field is in tension along the lines, and in compression perpendicular to the lines. The field around a charged object or an electron would be a three dimensional array of radial lines, going out forever.



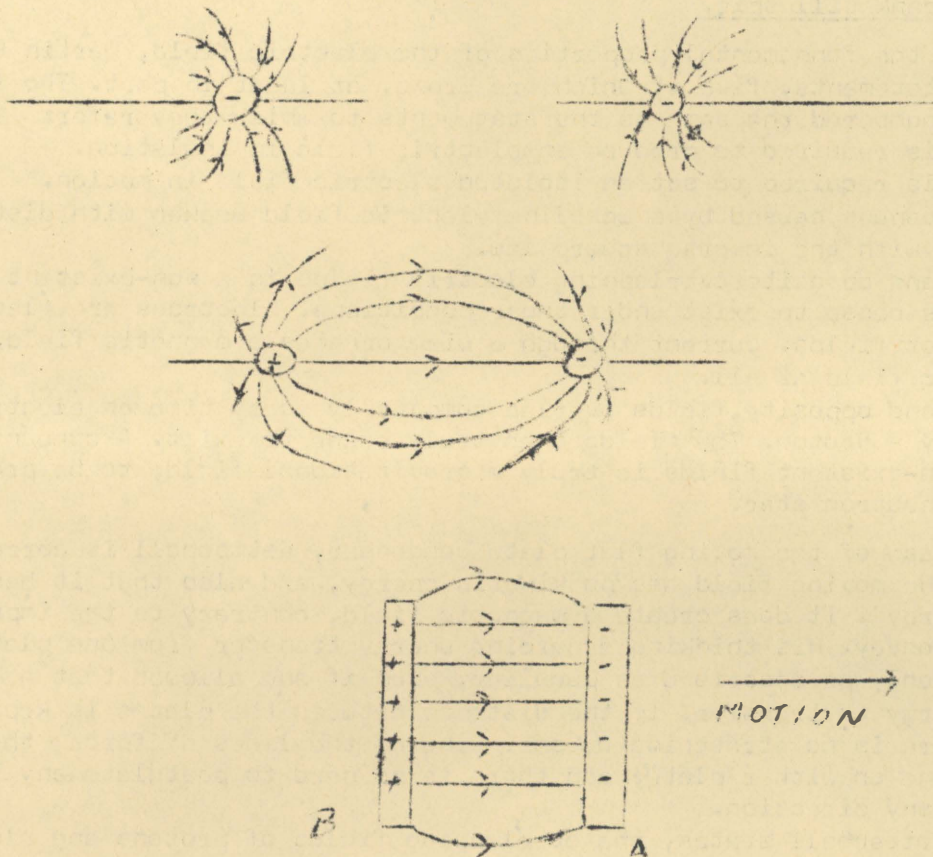
When two fields are brought together, we experience their combined effect, which is as though there was a new field as shown (see next page). When we consider moving electric fields in more detail, we can postulate the rule that electric fields move through space only along the compression directions and never in the tension directions.

Let us see what this means. Imagine we had two flat metal plates A and B arranged to be parallel with a gap between them. When charged up like a condenser, we would observe a field between the plates as shown. Now we set the assembly in motion as shown. We would find:

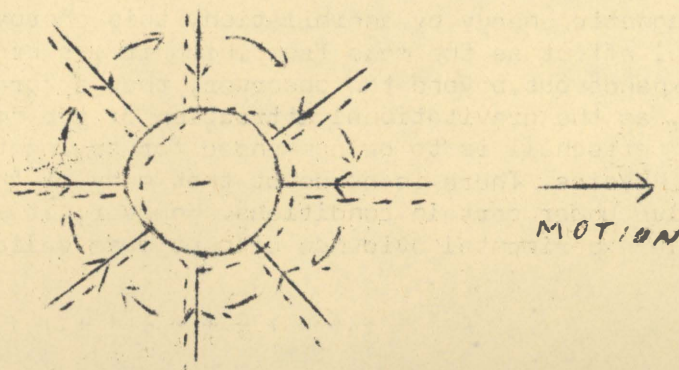
1. the "moving" field has no kinetic (magnetic) energy.
2. since the plate A is moving forward against the backward pull of the field, energy is constantly supplied to A. From here it passes to the field and then to the plate B, but energy does not propagate through electric fields in the tension direction.

All this makes sense if we assume that plate A "lays down" the field in space as it moves along the plate B "picks it up", while the field itself remains at rest in space.

If we apply the same thinking to the field around a moving electron or a moving charged sphere, we also get a very interesting result.



We find that the field behind the charge centre is opening outwards while in front it is sweeping together. Immediately in front of the charged body, the field is "swept up" while behind it is "laid down". The fan-like motion of the electric field corresponds precisely to the calculated and measured magnetic field around a moving charge. The conceptual and mathematical simplicity of electric fields have allowed us to fool ourselves into thinking we had it all worked out.



The Gravitational and electric fields are both "inverse square laws" fields. Surely, the electric field, which spans the Universe, and is laid immovable into space, is the fabric that holds it all together - what we call "gravitation". To sum up, we postulate as hypothesis that the field of each proton and electron in the universe should be regarded as an integral part of the structure of these particles, extending into space to 'infinity'. While these fields are ordinarily in a state of near perfect balance, their influence on the properties space is additive. This effect is the raising of the values of the dielectric constant and magnetic permeability of free space which lowers the speed of light and produces the effect known as "gravitation". In earlier papers, we discussed how two premises, namely that the velocity of light varies in space, and that gravitational energy is a portion of the rest mass energy of objects in gravitational (i.e. velocity of light) fields lead to gravitational propulsion and space travel speeds approaching that of light.

by Martin Gottschall.

COMMENTS by Frank Gillespie.

In describing the fundamental properties of the electric field, Martin Gottschall makes eight statements, five of which are wrong, at least in part. The following comments are numbered the same as the statements to which they refer:

1. No energy is required to produce an electric field in isolation.
2. No energy is required to set an isolated electric field in motion.
6. The disturbances caused by a wobbling electric field weaken with distance in accordance with the inverse square law.
7. Two equal and opposite overlapping electric fields is a non-existent concept. Both fields cease to exist under those conditions. Electrons are electric charges, not fields. Current through a wire creates a magnetic field, but no electric field at all.
8. Two equal and opposite fields overlap completely every time an electron is captured by a proton. The fields then truly cease to exist. A concentration of such non-existent fields is truly a gravitational field; to be precise, that of a neutron star.

In the case of the moving flat plate condenser, Gottschall is correct in saying that the moving field has no kinetic energy, and also that it has no "magnetic energy". It does create a magnetic field, contrary to the impression he tries to convey. His thinking regarding energy transfer from one plate to another, can only be described as peculiar, even if one allowed that a field possessed energy to transfer. If the distance between the plates is kept constant, there is no stretching or shrinking of the lines of force, therefore no work is done on either plate; and there is no need to postulate any transfer of energy in any direction.

If, as Gottschall states, the overlapping fields of protons and electrons are the sole cause of "gravitation", then how is it that an equal number of positrons and electrons in the same configuration would produce exactly the same electric fields, but considerably less "gravitation"? There is also the notion that no field possesses energy of itself; but a gravitational field is invariably linearly associated with mass; which in turn is equivalent to energy by the relation $E=mc^2$. Electric and magnetic fields have no such linear association with mass, and therefore cannot be correlated with gravitational fields. On the other hand, there is no argument that electromagnetic energy and mass are two manifestations of the same thing. In fact, if mass is converted entirely to electromagnetic energy by annihilation, this energy has exactly the same gravitational effect as the mass from which it was created. It is only as the radiation expands out beyond the observer, that a "gravitational wave" effect is produced, as the gravitational attraction of the "mass" disappears.

Martin Gottschall is to be commended for trying to find a new approach to the laws of Physics. There is no doubt that many of these laws are incomplete, or inoperative under certain conditions. However, it is unprofitable to ignore the available experimental evidence without some valid reason for so doing.

It's about Time

by David Seargent.

The subject of time travel is the 'in' topic at the moment it seems, and seeing how Mr. Prytz and Ms Goriss were kind enough to quote me pretty extensively in their paper last issue, I thought that it might be time (no pun intended!) to return from the grave and throw an article together on the subject.

I do not want to retract from what I said all those years ago in Scientific Enigma, but I think that the following extra points might be of interest to ruminate upon during those rare moments of idleness.

1) The causal paradox is a real headache for anyone wanting to believe in time travel, and the Prytz-Goriss partnership certainly pinpointed the major problems here. But the time-travel supporters are a tough lot, and no sooner is the paradox pointed out than they come up with an idea which appears to avoid it!

This idea makes use of a concept of the universe which has followed in the wake of quantum physics, namely, a concept of a universe in which there is more than one line of time. Typically, such a universe is seen as consisting of parallel or (more usually) branching lines of time in which the various possibilities potentially existing at any one moment are fulfilled.

The hope of the time-travel enthusiast is for the time traveller to go back into an alternative time line. That is to say, suppose John Doe goes back 50 years and kills his own grandfather. If there is only one time line, everything collapses because the time line is the one which includes (among a very large - possibly infinite - collection of things) the person called John Doe. But how can he exist if his grandfather was killed before J.D. was born?

"Simple" says the branching universe enthusiast. "That time line is not the one in which J.D.'s grandfather dies young. We have a cross-causation between time lines in which something from that time line causes a event which creates the other time line. But both time lines (and a large number - possibly an infinity - of others) are equally real." The strange result of this is that, if time travel is possible at all, it must be between time lines. It must be inter-temporal travel rather than intra-temporal travel.

Nevertheless, I don't think that this solves the paradox. These time lines (if they exist - and remember, this model is only one of many theories) are included as possibilities of a given moment. If one of these possibilities arises because (say) a grandson kills his grandfather before his own birth, we still have a future event causing a past one, and the future event would not be possible unless one of the possibilities included in the moment was actualized. We still have the paradox of a contemporaneous cause which (at the same time) does not yet exist. But how on earth can something be contemporaneous and future? Alternative time lines do not solve this, but this is the heart of the paradox!

2) If there is such a thing as time travel, why are we not being visited by people of the future?

Those who follow the time travel explanation of the UFO, of course, answer this by saying "Well, we are!" This, we cannot prove or disprove - we can only point out the difficulties of time travel as an hypothesis and we can only draw attention to the lack of any real evidence in favour of such a wild interpretation, of the UFO phenomenon. Is there any reason, apart from the apparent lack of any other suitable explanation, to suspect that they are from another time? I think we are really making the UFO sightings carry an awful load if we believe this. But if the UFOs are not time machines, why are we not being visited by our remote descendents?

If we hold to a single line of time, we could pull the old chestnut out of the fire - a great war which blows us back into the caves and prevents the development of a technology leading to time travel. Yet, even cave-men develop into technologists if given time, and time is what this is all about. Must we conclude that at some time in the future we blow ourselves right off the map, or must we conclude that there is to be an endless cycle of war-cavemen-development-back-to-technology-and-war...?

But if there is any validity in the existence of alternative time lines, even this begins to look weak. Surely, one of an infinity of time lines would avoid the final war. In fact, at least one must if this avoidance of war is a real possibility and if all the possibilities are fulfilled. In fact, the

number of possibilities inherent in both a war and a no-war situation must be nearly infinite - and this means there should be billions of time machines!!!

3.) The reason for postulating time travel (except as a possible explanation for the UFO) seems only to be its alleged analogy with space travel. Now that continued developments in black hole theory has made the initial suggestion of time travel by particles through black holes appear less likely, this alleged analogy may be correct?

Well, what do you mean by Space Travel?

(For a start, I must make clear that we do not necessarily mean outer space travel. I am only using the term to denote any movement in any space. Walking from one room to another - being movement in space - is space travel in the present sense.)

The sort of space travel in which we are interested is that in which something leaves one place, goes to another, and at a later time returns to the original. Our aim is to see how this compares with something that leaves one time, goes to another and returns to the initial time. What we want to find out is if this second, when made an exact analogy of the first, involves H.G.Wells-type time travel. Following the philosopher Richard Taylor, the first (i.e. travel back and forward in space) can be written as:

O is at place₁ at time₁, and also at place₁ at time₂; and endures from time₁ through time₂ but is then (i.e. at some time within that temporal interval) at places other than place₁.

If we want to make "moving back and forward in time" exactly analogous to this description, all we have to do is exchange 'time' and 'place' and vice versa. This gives:

O is at time₁ at place₁, and also at time₁ at place₂; it extends from place₁ through place₂ but is there (i.e. at some place within that spatial interval) at times other than time₁.

This description can apply in our experience, but it has nothing to do with 'time travel' in the sci.fi. sense.

For example, let O be an earthquake and place₁ and place₂ be two towns.

Suppose the earthquake occurs at the same time at those two towns and at every place between those two towns, except that at one place it is felt at a time other than time₁. This situation exactly fits the above description of something moving back and forward in time when this is made an exact analogy of moving back and forward in space!

In respect of time travel, in the other sense, Taylor writes:

The whole idea...is inconsistent, and exactly on the level with suggesting that something can be at a given place... and, while remaining entirely in that place, be also somewhere else...

We are a part of the spatial framework, and we are part of the temporal. We can move about in space, but we cannot leave this framework. And, we must assume, we can have movement back and forward in time (in the Taylor sense) but we cannot leave the temporal framework which is, in part, constituted by our history. But time travel wants us to do just this, to skip over history as if we are no longer a part of it. We can find no justification, from our analogies with space travel, that this even makes sense, let alone represent a real possibility.

References:

Taylor, Richard. - Metaphysics (2nd Edition) Prentice-Hall (Englewood Cliffs, New Jersey 1974).

ACUFOS AUSTRALIAN REPORT.

Despite having an extremely quiet year with very few reports of any magnitude, retrospectively we can see there was an increase in reports of interest in August-October last year.

ACUFOS investigators will already be aware of the initial details of the events of that period via their monthly ACUFOS BULLETIN, but for those readers who are currently not Centre investigators, here is a run down on the period's reports:-

POSSIBLE CLOSE ENCOUNTER AT DARKEY FOREST NSW. On Sunday 2 August 81, a coal miner travelling to work at 6.30 p.m. from Wollongong towards Helensburg saw an unusual object pass an estimated 200m over his head. The object was described as being 'coffin' shaped with angular sides and corners. It appeared the size of a "house in the sky", two full hands at arms length. A ring of yellow and white lights in the top section going on and off were observed, as was a large blue light in the centre of the object, and a faint yellow beam swept from side to side in the direction of travel. The object travelled from NE to SW with a faint humming noise. No vehicle nor radio interference was noted. (Source: Paul & Cassandra Sowiak-Rudej, Wollongong).

FORMATION OF OBJECTS REPORTED OFF THE COAST OF W.A. A formation of unusual objects was reported off the coast near Bunbury on 25 August 81. Three men said they saw up to 15 bright objects travelling in formation about 2 KM offshore at about 4 p.m. Surveyor's assistant John Harvey of Bunbury said about 15 bright silver symmetrical objects had hovered over the ocean. They then moved north rapidly and suddenly shot up vertically without changing speed. They reported looking nothing like aircraft. Flight operations in Perth airport were quoted as saying that there were no large groups of planes in the area at that time. Also it was mentioned that neither the Department of Transport nor the RAAF could shed light on the reports. The matter is still under investigation by Jeff Bell. (Source: "News" Perth 26.8.81).

NOISELESS OBJECT REPORTED FROM ALBANY WA. Mr. Evan Beckerleg and Mr. George Gray were travelling along the Lower Denmark Road towards Elleker at about 7 p.m. on 26 Aug 81 when an object is said to have flown across in front of them and into paddocks at the side of the road. Mr. Beckerleg is quoted as saying that they had stopped the car, got out and watched as it hovered silently over the paddock for about a minute. The object had three red lights, and two flashing white ones. It moved off and continued on in an undulating pattern across the paddocks in the direction of the South Coast Highway. It was noiseless. Jeff Bell is investigating (Source: "Advertiser" Albany WA 27.8.81)

NSW MYSTERY. A 48 year old man, Mr. Frank Burke, is reported by the "Daily Mirror" in Sydney (16.9.81) to have experienced a strong beam of light which enveloped his car as he drove on the Cambewarra Mountain Road between Kangaroo Valley and Nowra. It is reported that a tape recorder was melted by the encounter! Paul & Cassandra Sowiak-Rudej are investigating.

SOUTH AUSTRALIAN 'BEAM' CASE. An event on the 27 September 81 only recently surfaced in South Australia. Mr. Terry Hunter, a farmer of Tooperang (60 KMs SSE of Adelaide) said that at about 2100 hrs he had driven his motorkike to look for a sow. After travelling 8 minutes an intense 'tube of light' about 3m across suddenly shone on him. He was at this stage standing, with the beam on him. There were no shapes, no smell nor any noise. He related riding back on his bike with the beam following him. Suddenly it just 'shut off'. Duration 10 minutes. Following this he came down with 5 days of red watering eyes, and "everything ached just like the flu". UFOR (SA) have been alerted to the case.

UNIDENTIFIED RADAR TARGETS. At approximately 0200 hrs on Saturday 17 October 81, an Air Cargo L188 (Electra) aircraft flying from Sydney, New South Wales to Brisbane Queensland was between Sydney and Newcastle. After departing the Sydney area the three crew members noted two targets on the aircraft's RCA AVQ 30 radar (range 270 nm) at an estimated 40 nm West of the aircraft's northerly track, NW of the plane at that time. The two targets were confirmed

by Sydney ATC but Sydney advised that there was no known traffic in the area and couldn't identify the targets which were moving ahead of the plane on an almost parallel track. Nearing Newcastle, both targets vanished from the plane's radar. It is not known if the ATC at Sydney were able to continue a track. Total duration 15 minutes. The pilot doesn't want to pursue the matter further.
(Source: Personal report by pilot to Russ Boundy, UFOF(FNQ)).

PROCEEDINGS OF UFOCON 6.

Proceedings of the 6th annual Conference held in Adelaide South Australia October 1981 are now available through ACUFOS's Publishing service. Cost is \$15, which includes surface posting.

ACUFOS BIBLIOGRAPHY SERVICE

by John Prytz.

(Continued from last Journal)

I) Books in Print.

- 1) (American) Books in Print - R.R. Bowker Co., N.Y. (annual with supplement).
(Note: Separate volumes for authors, titles and subjects.)
- 2) Australian Books in Print - D.W. Thorpe Pty. Ltd, Melbourne (annual).
- 3) Australian Books: A Select List of Recent Publications and Standard Works in Print - National Library of Australia, Canberra (annual).
- 4) British Books in Print - J. Whitaker & Sons Ltd, London (annual)
- 5) Canadian Books in Print - University of Toronto Press, Toronto (annual).
(Note: separate volumes for authors & titles, and subjects.)
- 6) Paperbacks in Print (Great Britain) - J. Whitaker & Sons Ltd, London (annual)

J) BOOK REVIEWS.

- 1) Book Review Digest - H.W. Wilson Co., N.Y. (monthly, several cumulations, annual)
- 2) Book Review Index - Gale Research Co., Detroit, Michigan (bimonthly, annual).
- 3) Index to Australian Book Reviews - State Library of South Australia, Adelaide (quarterly, annual).
- 4) The Library Journal Book Review - R.R. Bowker Co., N.Y. (annual)

K) BIBLIOGRAPHIES.

- 1) Bibliographic Index: A Cumulative Bibliography of Bibliographies - H.W. Wilson Co., N.Y. (April, August, annual).
- 2) Current Bibliographical Information. - United Nations N.Y. (monthly)

L) Biographies.

- 1) Biography Index - H.W. Wilson Co., N.Y. (quarterly, annual, triennial).

II) SCIENCE AND TECHNOLOGY.

- 1) Applied Science & Technology Index - H.W. Wilson Co., N.Y. (monthly, quarterly annual).
- 2) Australian Science Index - CSIRO, Melbourne (monthly, annual)
- 3) Australian Scientific and Technological Reports - National Library of Australia, Canberra (bimonthly).
- 4) CSIRO Index - CSIRO, Melbourne (monthly, annual)
- 5) CSIRO Published Papers: Subject Index 1916-1968 (16 Volumes) - CSIRO, Melbourne - 1973.
- 6) Current Technology Index - The Library Association, London (monthly, annual)
(Note: prior to 1981 titled British Technology Index)
- 7) General Science Index - H.W. Wilson Co., N.Y. (monthly, several cumulations, annual).
- 8) Scientific and Technical Books and Serials in Print: 1981 - R.R. Bowker Co., N.Y. - 1981.

- 9) SSAL: Scientific Serials in Australian Libraries. - CSIRO, Melbourne - 1976 (with June 1981 supplement).

NOTE: Further listings of various reference tools will be provided if reader reaction warrants it.

Bibliography Updates

Sagan, Carl - Books By.

- 1) Sagan, Carl - Planetary Explorations Condon Lecture - Oregon State System of Higher Education, Eugene, Oregon - 1970.
- 2) Sagan, Carl & Leonard, Jonathon Norton - Planets - Time-Life International, (Nederland) N.V. - 1967 (Time, Inc., N.Y. - 1966).

Life In The Solar System: Mars (Pre-Viking)

- 1) Jukes, Thomas H. - "Life on Mars?" - Jama (Journal of the American Medical Association), 7 April 1975 - p.68-69.

Monsters.

- 1) Clark, Jerome - "Unidentified Flapping Objects" - Oui, October 1976 - p.95-98, 100, 105-106.

Sagan, Carl - About.

- 1) Cook, B. - "What if...?" - Science Digest, Sept. 1980 - p.8-15.
- 2) Cott, J. - "Cosmos" - Rolling Stone, 25 Dec. 1980/8 Jan. 1981 - p.43+.
- 3) Golden, E. - "Carl Sagan: Astronomical Superstar" - Reader's Digest (U.S. Edition), Feb. 1981 - p.9-10+.
- 4) McMurrin, K. - "His Cosmos A Huge Success, Carl Sagan Turns Back To Science and Saturn's Rings" - People, 15 December 1980 - p.42-45.
- 5) Moss, R.F. - "Scientist Superstar" - Saturday Review, Aug. 1980 - p.24-25.
- 6) O'Malley, W.J. - "Carl Sagan's Gospel of Scientism" - America, 7 Feb. 1981 p.95-98.
- 7) Rebovich, D.P. - "Sagan's Metaphysical Parable" - Society, July/Aug. 1981 - p.91-95.
- 8) Roberts, D. - "Carl Sagan's Cosmos" - Horizon, Oct. 1980 - p.22-31.
- 9) "Sagan's Cosmos" - Astronomy, Sept. 1980 - p.62.
- 10) Sanoff, A.P. - "Science and Religion: 'Similar Objective, Different Methods': A Conversation with Carl Sagan" - U.S. News & World Report, 1 December 1980 - p.62-63.
- 11) Wakin, E. - "God and Carl Sagan: Is the Cosmos Big Enough for Both of Them?" - U.S. Catholic, May 1981 - p.19-24.

Exobiology.

- 1) Dick, S.J. - "Origins of the Extraterrestrial Life Debate and Its Relation to the Scientific Revolution" - Journal of the History of Ideas, Jan./March 1980 - p.3-27.
- 2) Feinberg, G. & Shapiro R. - "Human Species As A Local Manifestation of Universe Life" - Science Digest, Sept. 1980 - p.36-39.
- 3) Goldsmith, D. (Editor) - The Quest for Extraterrestrial Life: A Book of Readings - University Science Books, Mill Valley, Calif. - 1979.
- 4) Verschuur, G.L. - "Is the Cosmos Alive?" - Omega, Nov/Dec. 1981. - p.124.

Life In The Solar System: Mars (Post Viking).

- 1) Cess, R.D. et.al. - "The Martian Paleoclimate and Enhanced Atmospheric Carbon Dioxide" - Icarus, January 1980 - p.159-165.
- 2) Imshenetsky, A.A. et.al. - "On the Possibility of Life on Mars" - Life Sciences and Space Research, XVIII, 1980 - p.45-51.
- 3) Sessions, L. - "Preparing Mars for Life" - Science Digest, Nov/Dec. 1980 p.128-129+.
- 4) Soffen, G.A. - "Life on Mars?" (in) - Beatty, J.K. et.al. (Editors) - The New Solar System - Cambridge Uni. Press, Cambridge & Sky Publishing Corp., Cambridge, Mass. - 1981 - p.93-96.

Life In The Solar System: The Jovian Planets/Satellites.

- 1) Capone, L.A. et.al. - "Formation of Organic Molecules on Titan" - Nature, 3 Sept. 1981 - p.45-46.
- 2) Gupta, S. et.al. - "Organic Synthesis in the Atmosphere of Titan" - Nature, 29 Oct. 1981 - p.725-727.

Extraterrestrial Intelligence - Religious Aspects.

- 1) McMullin, E. - "Persons in the Universe" - Zygon: Journal of Religion and Science, March 1980 - p.69-89.

Extraterrestrial Intelligence.

- 1) Benford, G. - "Extraterrestrial Intelligence?" - Quarterly Journal of the Royal Astronomical Society, June 1981 - p.217.
- 2) Lago, D. - "Cosmic Brain" - Science Digest, Nov/Dec. 1980 - p.36+.
- 3) Schorn, R.A. - "Extraterrestrial Beings Don't Exist" - Sky and Telescope Sept. 1981 - p.207.
- 4) Tipler, F.J. - "A Brief History of the Extraterrestrial Intelligence Concept" - Quarterly Journal of the Royal Astronomical Society, June 1981 - p.133-145.
- 5) Tipler, F.J. - "Additional Remarks on Extraterrestrial Intelligence" - Quarterly Journal of the Royal Astronomical Society, Sept. 1981 - p.279-292.
- 6) Tipler, F.J. - "Extraterrestrial Intelligent Beings Do Not Exist" - Physics Today, April 1981 - p.9, 70-71.
- 7) Tipler, F.J. - "Extraterrestrial Intelligent Beings Do Not Exist" - Quarterly Journal of the Royal Astronomical Society, Sept. 1980 - p.267-281.

Astro-Archaeology & Ancient Astronauts.

- 1) Aveni, A.F. - Skywatchers of Ancient Mexico - University of Texas Press, Austin, Texas © 1980.
- 2) Burl, A. - "Ancient Astronomers of the New and Old Worlds" - Nature, 1 October 1981 - p.335.
- 3) Feder, K.L. - "Foolsgold of the Gods" - The Humanist, Jan/Feb. 1980 - p.20-23.
- 4) "Mayans Lived By Venusian Calendar" - New Scientist, 8 October 1981 - p.101
- 5) McAuliffe, K. - "Explorations: Modern Megalith" - Omni, August 1981 - p.118-120.
- 6) Mordin, P. - "Living By the Stars" - New Scientist, 20 August 1981 - p.477-479.
- 7) Trotter, R.J. - "Lost in the Naval of the World" - Science News, 1 August 1981 - p.77.

Unidentified Flying Objects.

- 1) Broderick, D. (+) MacKrell, B.H. - "UFOs: What if..." - Omega, Nov/Dec 1981 - p.58-63, 123.
- 2) Crew, E.W. - "Meteorological Flying Objects" - Quarterly Journal of the Royal Astronomical Society, June 1980 - p.216-219; June 1981 - p.218.
- 3) FitzGibbon, D. - "Of Witches, UFOs, & the American Unconscious" - Encounter April 1980 - p.35-45.
- 4) Pendle, C. - "Mysteries of the Universe" - (Evening Post) Outlook, August 1981 - p.12-17.

Tunguska, Siberian Explosion (1908)

- 1) Turco, R.P. et.al. - "Tunguska Meteor Fall of 1908: Effects on Stratospheric Ozone" - Science, 2 October 1981 - p.19-23.

Monsters

- 1) "Dinosaur Hunt" - Omega, Nov/Dec. 1981 - p.27.
- 2) Halpin, M.M. & Ames, M.M. (Editors) - Manlike Monsters on Trial: Early Records and Modern Evidence - University of British Columbia Press, Vancouver British Columbia - 1980.
- 3) Wyllie, K. - Bigfoot: A Personal Inquiry Into A Phenomenon - Viking Press, N.Y. - 1980.

Artificial Intelligence

- 1) "Computers That Outperform the Experts" - The Economist, 26 Sept. 1981. 95-96.
- 2) "Finding the Key to Intuition" - Omega, Sept/Oct 1981 - p.105.
- 3) Mankin, E. - "Darwin's Machines" - Omega, Sept/Oct. 1981 - p.110-111.